

**Appendix 2:** Percentage change in all-cause, cardiovascular and respiratory mortality in Launceston and Hobart, Tasmania from January 1994 - May 2001 to June 2001 - November 2007. Adjusted for age and meteorological conditions and secular mortality trends in Tasmania. [posted as supplied by author]

Individual model results (as presented in Table 3 of the manuscript) are shown for Launceston and Hobart. The final column shows the results from the combined model.

	<b>Launceston (intervention)</b> (individual model)		<b>Hobart (non-intervention)</b> (individual model)		<b>p for the interaction period*town</b>
	<b>Percent change (95% Confidence Interval)</b>	<b>p</b>	<b>Percent change (95% Confidence Interval)</b>	<b>p</b>	<b>Combined model specified below*</b>
<b>All year – males and females combined</b>					
All-cause mortality	-2.7 ( -8.7 to 3.7)	0.40	1.4 (-3.0 to 6.0)	0.54	0.32
Cardiovascular mortality	-4.9 ( -15.5 to 7.0)	0.40	0.9 (-7.1 to 9.6)	0.83	0.03
Respiratory mortality	-8.5 ( -23.2 to 9.0)	0.32	4.8 to (-7.4 to 18.6)	0.50	0.19
<b>All year - males</b>					
All-cause mortality	-11.4 (-19.2 to -2.9)	0.01	0.7 (-5.4 to 7.2)	0.82	0.03
Cardiovascular mortality	-17.9 (-30.6 to -2.8)	0.02	-7.1 (-16.8 to 3.8)	0.19	0.21
Respiratory mortality	-22.8 (-40.6 to 0.3)	0.05	3.4 (-13.1 to 24.4)	0.67	0.10
<b>All year - females</b>					
All-cause mortality	2.7 (-5.3 to 11.4)	0.52	-0.7 (-6.3 to 5.2)	0.80	0.51
Cardiovascular mortality	2.3 (-12.2 to 19.3)	0.77	3.6 (-7.6 to 16.2)	0.54	0.06
Respiratory mortality	1.0 (-18.9 to 24.4)	0.96	-1.4 (-15.5 to 15.1)	0.86	0.83
<b>Wintertime – males and females combined</b>					
All-cause mortality	2.2 (-14.1 to 11.3)	0.73	-2.0 (-10.2 to 6.9)	0.64	0.65
Cardiovascular mortality	-19.6 ( -36.3 to 1.5)	0.06	-7.0 (-20.8 to 9.2)	0.38	0.21
Respiratory mortality	-27.9 (-49.5 to 3.1)	0.07	8.0 (-16.9 to 40.4)	0.60	0.10

\*Combined model

$\log(O_{ij}) = \text{Town} + \text{Period} * \text{Town} + \text{Age}_j + T_i + T_{i-2} + H_i + H_{i-2} + \text{DOW}_i + \text{Flu}_i + \text{SecularTrend} + \text{offset}(\log(\text{Pop}_{ij}))$  (Equation 1)

Where:  $O_{ij}$  = observed number of cases on day<sub>i</sub> in Age<sub>j</sub>; Period = indicator variable for pre- and post-intervention periods; Age = age groups by 15 year intervals to age 74, then 5 year intervals to 84, and ages 85 years and older;  $T_i$  = daily mean temperature (°C);  $T_{i-2}$  = average of 3-day lagged temperature day<sub>i</sub> (°C);  $H_i$  = daily mean dew point (°C);  $H_{i-2}$  = average of 3-day lagged dew point (°C); Flu = indicator variable for days when the 14-day moving average of hospital admissions for influenza and pneumonia in Tasmania exceeded the 95<sup>th</sup> percentile; SecularTrend = the 150-day moving average of the daily directly standardised cause-specific mortality rates for Tasmania (excluding the intervention population of Launceston); and  $\text{Pop}_{ij}$  = interpolated population on day<sub>i</sub> in Age<sub>j</sub>.